DOCUMENT RESUME

ED 336 449 UD 028 183

TITLE	Teaching Ideas. The Clipboard Connection. Chapter I Resource Center Curriculum and Instruction.
INSTITUTION	Advanced Technology, Inc., Indianapolis, IN.
SPONS AGENCY	Office of Elementary and Secondary Education (ED), Washington, DC. Compensatory Education Programs.
PUB DATE	May 90
NOTE	8p.
AVAILABLE FROM	Advanced Technology Inc., 2601 Fortune Circle East, Suite 300A, Indianapolis, IN 46241.
PUB TYPE	Guides - Classroom Use - Teaching Guides (For Teacher) (052)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	*Classroom Techniques; *Compensatory Education; Educationally Disadvantaged; Elementary Secondary Education; *Learning Activities; *Learning Strategies; Mathematics Instruction; Problem Solving; Reading Writing Relationship; Resource Materials; Science Instruction; *Teaching Methods; *Thinking Skills; Writing Instruction
IDENTIFIERS	Education Consolidation Improvement Act Chapter 1; Technical Assistance Centers

ABSTRACT

The "Clipboard Connection" is a methodology to facilitate the rapid circulation of relevant pre-existing materials from Chapter 1 Technical Assistance Centers (TACs) to their clients, teachers of educationally disadvantaged children in resource centers. Each "Clipboard Connection" consists of a lead sheet summarizing the contents of the materials (reprints of journal articles, brochures, etc.) to be distributed, and the materials themselves. This compilation focuses on ideas for effective teaching developed by classroom and educational professionals. The section includes an overview for teachers titled "A Problem Solving Model" and the following one-page descriptions of learning activities: (1) "Teacher as Writer"; (2) "Troll Tales: Cumulative Literary Experiences"; (3) "Estimating and Averaging In Point Graphing and Temperature Measurement"; (4) "120 Process Problems"; and (5) "Language Reinforcement." (AF)

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The Clipboard
CONNECTION

May 1990

Chapter 1
Resource Center
Curriculum & Instruction

Teaching Ideas

The *Teaching Ideas* presented here were primarily developed by classroom and educational professionals who have kindly given their permission for publication.

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What ideas are YOU coming across out in the field? Do you have some of your own? We'd be delighted to publish these and to give credit where credit is due. Please include the originator's name and institution.

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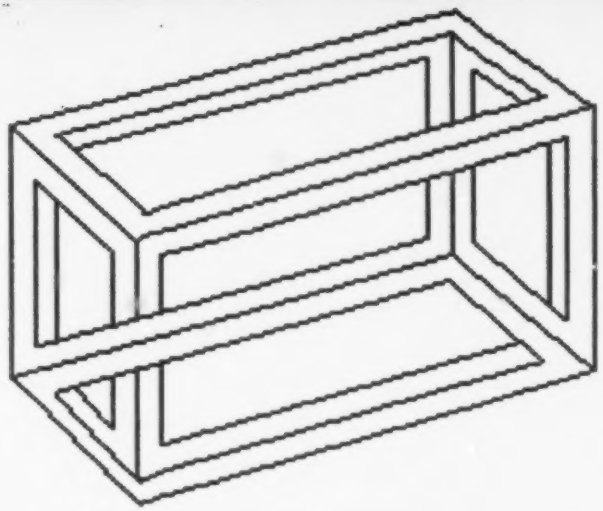


A Problem Solving Model*

Learning to solve problems effectively is one of life's greatest challenges. As faculty members, we can help our students enhance their problem-solving skills by first teaching them how to solve problems and then giving them practice solving a variety of content-related problems.

1. **Is there a problem?**
   Is the issue important to you?
   Does the issue affect work unit functioning/performance?
   Can you ignore it?

2. **What is the problem?**
   (Problem identification and definition)
   What are the clues?
   What results do you want?
   How can you state the problem?
   What are the key identifiers in the problem statement?

3. **What are alternative solutions?**
   Brainstorm possible solutions, without editing.
   What are the boundaries, constraints?
   Discuss with others, if necessary.

4. **What are the advantages and disadvantages of each alternative?**
   What are the advantages?
   What are the disadvantages?
   What additional information do you need?
   What are the consequences of each alternative?

5. **What is the best solution?**
   Which alternative(s) will you choose? Why?
   Will this alternative give you the results you want?

6. **How will you implement this solution?**
   What steps will you need to take? Develop an action plan.
   Implement the solution. How will you inform people?

7. **What monitoring is necessary?**
   How can you review and adjust your strategies?
   How will you know if the solution worked and how will you modify, if necessary?

From: "The Thinking Times"
Thinking Skills Project
Community College of Aurora
Aurora, Colorado 80010

* *Dewey, Chaffee, Hewett*

Teacher as Writer

adapted by:

Linda Thompson
State Department of Education
Chapter 1
Indiana

Focus: Teacher demonstration can be a powerful tool to show writing as a process and illustrate the simultaneous activities involved in writing as communication (e.g., talking, listening, thinking, risk-taking, problem-solving). It also provides another vehicle for showing the teacher as learner.

Materials: Chalkboard and chalk
or overhead and film

Procedure:

1. The teacher thinks of an idea for a story based upon their own experience.
2. Students are encouraged to interview the teacher to elicit ideas, feelings, and details until the teacher feels ready to write.
3. The teacher begins writing their story on the chalkboard, crossing out, adding, and changing the text as would naturally occur during the writing process. As the writing progresses, the teacher "thinks out loud" (talks) about their reactions and changes.
4. Throughout this process, the teacher asks questions and interacts with the students. Students are encouraged to offer suggestions that might clarify or strengthen the teacher's story.

Extension: Students are encouraged to write their own texts after first discussing their ideas with each other in pairs or small groups.

Evaluation: Students write their own stories and include the use of teacher-demonstrated behaviors in their writing process.

Troll Tales: Cumulative Literary Experiences

developed by:
Joy F. Moss
University of Rochester
New York

Focus: Many researchers have shown that the quality of comprehension is determined, to a great extent, by the prior knowledge that the readers/listeners bring to the text. In this activity, children are invited to respond to each new literary selection in light of previous literary experiences. They learn strategies for reactivating relevant background knowledge and for making connections between prior literary experiences and present ones.

Materials:
Trolls by Ingri and Edgar d'Aulaire (or similar descriptive book)
Collection of troll tales
Chalkboard, chart paper, or overhead

Procedures:

1. Read aloud *Trolls* to introduce children to the world of trolls and their relatives. Ask the children to use the information to generate a list of troll characteristics and habits as well as myths about encounters between trolls and humans. This list is recorded on the chalkboard, chart paper, or overhead, and it serves as the base from which to begin subsequent excursions into the troll world.

2. Place a display table or shelf near the troll chart to hold the collection of troll tales that provide the literary context. Read several of the books aloud to the class and encourage the children to select one or more of these books to read independently or with a partner.

3. During the class story sessions, ask the children to consider each new story in light of those read or heard previously. That is, ask them to look for connections between the diverse tales in the troll collection. Guide this search by introducing questions into the class discussion of each story. These questions also serve as a model for self-questioning during independent reading.

Extension: Use the troll chart (which should be expanded as children gather more information about trolls) and information generated during discussions to set the stage for children to write and illustrate their own troll tales.

(Ideas and Insights: Language Arts in the Elementary School. Dorothy Watson, (Ed.), Urbana, IL: National Council of Teachers of English).

Estimating and Averaging in

point graphing
and
temperature measurement

developed by:

Janet Detrick
Chapter 1
Malden Elementary
Kanawha County
West Virginia

Age or grade level: Fifth/Sixth

Skill, concept: Coordinate point graphing, temperature measurement

Objective (s): Each student will estimate and find average temperatures, read a thermometer and record the results on a coordinate point graph.

Procedure or process:

On two pieces of posterboard, draw a grid with about one inch squares. Label one grid Celsius and the other one Fahrenheit. On the left side of your graph, mark each line in degrees. Mark the Celsius graph in increments of 2 and the Fahrenheit graph by 5. Cover your graphs with clear contact paper or laminate them. Use waterbase markers and you can use them year after year.

Select a time period for your graph and fill in the dates across the bottom. Leave out weekends and days you will not attend school. If you have different classes, choose one class at a time to be your record keepers.

Each student in the group will have turns in reading the thermometer and recording the information on the graphs.

Before you begin keeping your graph for each time period, have students estimate what they believe the average temperature for the time period in question will be in both Celsius and Fahrenheit. At the end of the time period, find the average temperature with your classes. Give the student that came the closest some kind of reward. You can then wipe your graphs off, choose a new time period and start all over again. Keep your graphs going all year and compare the temperatures from each time period at the end of the year.

Variations: Place three thermometers at different locations around the school. Find and record the average temperature each day.

Keep a record of two things on the same graph in different colors.
Example: Red - the predicted high (Get this out of the newspaper each morning or on the radio.)
Blue - the actual temperature when your students measure the temperature.

Keep a record of the temperature in both the morning and afternoon.

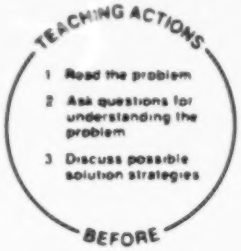
Have a problem solving activity each week based on the information on the graphs.

I20 Process Problem

developed by:

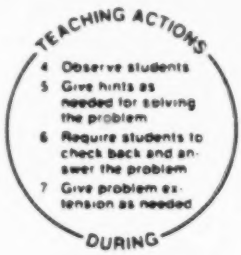
Margaritte Hart and Staff
Chapter 1
M.S.D. of Washington Township
Indiana

I keep my pet tarantula in a cardboard box. The length of the box is twice the width. The height is half the width. The length is 16 cm. What is the volume of my tarantula's box?



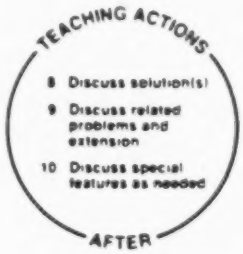
Understanding the Problem

- What is volume? (the amount of space inside)
- What is the length of the box? (16 cm)
- What do you know about the height? (It is $\frac{1}{2}$ the width.)


TEACHING ACTIONS
4 Observe students
5 Give hints as needed for solving the problem
6 Require students to check back and answer the problem
7 Give problem extension as needed
DURING

Planning a Solution

- What 3 measures do you need to know to find the volume of the box? (length, width, height)
- What is the length of the box? (16 cm) Do you know anything else about the length? (It is twice the width.) If the length was 4, what would the width be? (2)
- Do you know anything else about the width? (The height is half the width.) If the width is 6, what is the height? (3)
- How do you find volume? (V = L × W × H)



Finding the Answer

Work Backwards

Length is 16 cm.
Length is 2W—16 ÷ 2 = 8, so width is 8 cm.
Height is $\frac{1}{2}$W—$\frac{1}{2}$ × 8 = 4, so height is 4 cm.

V = L × W × H
V = 16 × 8 × 4
V = 512 cm^3

The volume of my tarantula's box is 512 cm^3.

Related Problems: 115, 99, 75, 60, 59

Problem Extension

If the length was 12 cm, what would the volume be? (216 cm^3)

Language Reinforcement

through
Oral Reading
and Retelling

developed by:

Linda S. Reid
Chapter 1
Guyandotte Elementary
Cabell County
West Virginia

SUBJECT AREA: Reading

AGE or GRADE LEVEL: K-3

SKILL, CONCEPT:

a. Language reinforcement
b. Oral reading activity

OBJECTIVE (s): The child will be able to read the book he has helped prepare.

PROCEDURE or PROCESS:

Discuss a favorite story such as **The Three Bears**. Have the children take turns re-telling the story. As each child tells a major event, record his words on a ditto master, at the bottom of the page, (use one ditto per child). Go over each child's part of the story with him.
Have the child then illustrate his part of the story on his page, encouraging large pictures.
Run the pages off and put together as a book. The child has a **coloring book** that he can read by himself.
A favorite holiday or some major event in the child's life may be used as well as stories.

EVALUATION (formal - informal):

An informal evaluation is used by listening to the child read what he has shared through language experience.